

Product Guide

EZEye Ambient Light Sensor —Model #1011A

The EZEye sensor is a high accuracy device that matches the spectral sensitivity of the human eye. This is important when detecting or measuring lighting conditions in places influenced by incandescent, fluorescent and natural light sources, where other type of sensors like photocells can give erroneous measurements.

Typical uses of the sensor include daytime/nighttime determination, automated closure of drapes, protection of light sensitive goods, optimization of plant growth based on illumination, home theater control, etc. EZEye can be readily interfaced with an I/O controller of your choice including the EZIOxx line from Simplehomenet.



Installation

- EZEye can be mounted using the provided double-sided tape, or any method or your choice. The slotted window must face the area to be monitored and must be clear of any obstructions blocking the light to be measured. The adjustment potentiometer needs only be accessible if using the sensor in digital mode.
- Connect the sensor to the I/O module or alarm panel of your choice, ensuring the expected voltage output range matches the range needed by the device being interfaced to. Be sure to observe the wire coloring and the outlined specifications above.
- **IMPORTANT:** The sensor has two types of outputs. The analog output is used when the illumination level needs to be measured (discrete values.) The digital output is used to determine if the illumination is above or below a certain threshold which is adjusted with the potentiometer in the back of the EZEye. The digital level will be on when the signal is above the set threshold. The two outputs can be used concurrently and do not interact with each other.

Connecting to EZIOxx Units

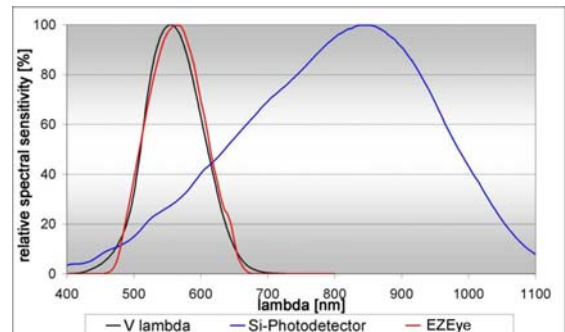
- **Connecting to a Simplehomenet EZIO8SA:** In analog mode, connect the green wire to **either** AnI1 (analog input 1) or AnI2 (analog input 2), the black wire to GND, and the red wire to +12V. If monitoring in digital mode is desired, connect the white wire to the (-) side of an opto-isolated input, with the other input terminal (+) connected to +12V. The full scale is 1023 counts, corresponding to 3 volts.
- **Connecting to a Simplehomenet EZIO6I:** In analog mode, connect the green wire to **either** AN1 (analog input 1) or AN2 (analog input 2), the black wire to GND, and the red wire to +12V. If monitoring in digital mode is desired, connect the white

wire to the (-) side of an opto-isolated input, with the other terminal (+) connected to +12V. The full scale is 1023 counts, corresponding to 4.5Volts.

- **Connecting to a Simplehomenet EZIO2X4:** The voltage available on the 5V terminal of the EZIO2X4 is not sufficient for reliable sensor operation, therefore, this voltage must be boosted by connecting a 1.5—9V battery in series with the sensor (Battery + to the sensor, and Battery (-) to the 5V terminal.) Otherwise, use the same instructions given above for the EZIO6I.

Spectral Response

- The figure below shows how the EZEye response is perfectly matched to that of the human eye.



SPECIFICATIONS:

Power Requirements:

Operating Voltage: 5-24VDC
Operating Current: < 5 Milliamperes

Wire Contacts:

Red Wire: +8-18VDC
Black Wire: - Ground
Green Wire: Analog output
White Wire: Digital output

Output:

Range: 0-1000lx
Accuracy: +/- 0.5% (5-25°C)